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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 586,270	11/30/2000	David D. McKay	7523	6472

27752 7590 12/03/2001

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PATENT DIVISION
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EXAMINER

HUG, ERIC J

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 12/03/2001

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/586,270

Applicant(s)

MCKAY ET AL.

Examiner

Eric Hug

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 30 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 26-45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 30 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of the restriction in Paper No. 5 is acknowledged. The traversal is on the ground(s) that the present invention claims a single invention, the chemical composition for softening cellulose structures, the resultant cellulose structures, and the method of using the composition to soften cellulose structures. This is not found persuasive because as described in paper No. 5, the product as claimed (a cellulosic structure) can be made by another and materially different process. The cellulosic structure of Claims 1-11 is not limited to tissue or multi-layered webs, and the method steps for making a soft cellulosic structure can be very different from the method steps described in claims 26-45 (for example, utilizing discrete molds instead of the process shown in Figure 2).

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation "an effective amount of softening active ingredient" is vague and indefinite.

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Claim Objections

Claim 25 is objected to because of the following informality:

Original Claim 25 is missing from the disclosure. Claim 26 was renumbered as Claim 25 (37 CFR 1.126). Thus, Claim 25 as now numbered should be dependent on Claim 24.

Appropriate correction is required.

Claim Rejections - 35 USC § 102/103(a)

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States;

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 12, 13 and 15-25 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tai (US 4,497,716). Tai discloses a fabric softening composition comprising a quaternary ammonium compound, water, a polyhydric alcohol for storage stability (a plasticizer), an electrolyte such as sodium chloride, and a non-

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ionic surfactant. Both the electrolyte and non-ionic surfactant are used as viscosity control agents (as described above). It would be obvious that the non-ionic surfactant serves as a bilayer disrupter as claimed. With respect to the claims:

Claims 12, 15, 19, 20, 21: The combination of ingredients reads on the claims.

Claim 13: The quantity of quaternary ammonium compound is 10-25%.

Claims 16-18: The claimed quaternary ammonium compounds are disclosed or suggested.

Claim 22: This is an obvious amount of salt to be added to modify the viscosity without gelling the mixture.

Claim 23: The amount of non-ionic surfactant used as a viscosity control agent (Tai) relative to the amount of quaternary ammonium compound reads on the claimed range.

Claims 24, 25: The bilayer disrupters of the claims are read by or suggested by the non-ionic surfactants of Tai.

3. Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Phan et al (US 5,543,067) in view of Tai (US 4,497,716). Phan discloses self-emulsifiable biodegradable softening agents for use in cellulose materials, including tissue papers. The softening agent comprises a quaternary ammonium compound (the active ingredient) and a polyhydroxy compound (which serves to provide stability under storage). The softening agent does not comprise an electrolyte (such as sodium chloride) or a bilayer disrupter (such as a non-ionic surfactant).

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Tai discloses a fabric softening composition comprising a quaternary ammonium compound, a polyhydric alcohol for storage stability, an electrolyte such as sodium chloride, and a non-ionic surfactant. Both the electrolyte and non-ionic surfactant are used as viscosity control agents. The reference teaches that salts are used in the art to modify the viscosity of softening compositions, but that there is a tendency for the compositions to gel. The reference then teaches that the addition of non-ionic surfactants can provide better viscosity control. At the time of the invention, it would have been obvious to one skilled in the art to add a salt and a non-ionic surfactant to the softening agent of Phan for viscosity control, and then utilize the softening agent in tissue paper. With respect to the claims:

Claims 1, 7: The combination of ingredients reads on the claims.

Claims 2-4: The claimed quaternary ammonium compounds are given by Phan et al.

Claims 5, 6: The polyhydroxy compound of Phan or the polyhydric compound of Tai serve as a plasticizer (for storage stability). The polyhydric compound of Tai can be polyethylene glycol or polypropylene glycol.

Claim 8: The amount of non-ionic surfactant used as a viscosity control agent (Tai) relative to the amount of quaternary ammonium compound reads on the claimed range.

Claims 9, 10: The bilayer disrupters of the claims are read by or suggested by the non-ionic surfactants of Tai.

Claim 11: Tissue paper is suggested by Phan.

4. Claims 1-7, 9-21, 24 and 25 are rejected under 35 U.S.C. 103(a) as obvious over Thebrin et al (US 6,228,223). Thebrin discloses a softening composition for cellulosic materials. The

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composition comprises a quaternary ammonium compound, a nonionic surfactant, a glycol, and water. The composition comprises at least 20% by weight of the quaternary ammonium compound. The composition comprises all the ingredients of the present invention, except for the electrolyte for viscosity control, not expressly disclosed by the reference. Adding salts such as sodium chloride to softening compositions for viscosity control is well known in the art, such as disclosed in Tai (see above) and Haslop and Guenin (see below). Therefore, it would be obvious to one skilled in the art to add sodium chloride or similar electrolyte as an inexpensive means of controlling the viscosity of the softening composition. Thebrin reads on all the ingredients (claims 1, 5, 6, 7, 12, 15, and 19-21), formulas (claims 2-4, 9, 10, 16-18, 24, and 25), the levels of quaternary ammonium compound (claims 13 and 14), and tissue (claim 11).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Hutcheson (US 5,296,024) discloses a chemical composition for paper comprising cationic softeners (amine compounds), a non-ionic surfactant for dispersability, sodium chloride for controlling the viscosity, and water.

Haslop (US 4,793,943) discloses liquid detergent compositions comprising quaternary ammonium softening agents, electrolytes (inorganic salts), and non-ionic surfactant "Builders". Haslop teaches the concept of a bilayer, and the use of the electrolytes and non-ionic surfactants for viscosity control and product stability.

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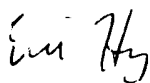
Guenin et al (US 5,447,644) discloses a method of controlling the viscosity of fabric softeners using a non-ionic viscosity control agent and an electrolyte (sodium chloride or acetate).

Wahl et al (US 5,747,443) discloses fabric softeners comprising quaternary ammonium compounds at 2-80% by weight of the composition. The compositions also comprise glycols, water soluble calcium or magnesium salts, and a nonionic surfactant as a viscosity modifier.

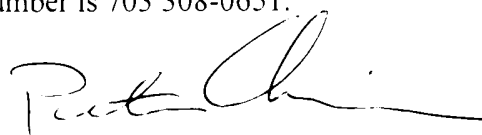
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric Hug whose telephone number is 703 308-1980. The examiner can normally be reached on Monday through Friday, 8:00 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 703 308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703 305-7718 for regular communications and 703 305-3599 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0651.



jeh
November 7, 2001



PETER CHIN
PRIMARY EXAMINER